

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A multi-domain liquid crystal display device comprising:
first and second substrates opposing each other between a liquid crystal layer;
a plurality of gate lines and data lines on the first substrate lengthwise and crosswise,
to define at least two pixel regions;
a common auxiliary electrode on a layer equal to the gate lines to surround each of the
pixel regions;
a gate insulating film on the first substrate;
a passivation film on the gate insulating film including the first substrate;
a pixel electrode in each of the pixel regions, wherein at least one of the pixel regions
is divided into a plurality of domains;
a light-shielding layer on the second substrate;
a color filter layer on the light-shielding layer;
a common electrode on the color filter layer;
at least one electric field distortion dielectric structure in each of the at least two pixel
regions, wherein the dielectric structures in neighboring pixel regions have different, and not
mirror-image, configurations; and
an alignment film on at least one of the first and second substrates.
2. (Original) The multi-domain liquid crystal display device as claimed in claim 1,
wherein the pixel electrode overlaps the common auxiliary electrode.

3. (Original) The multi-domain liquid crystal display device as claimed in claim 2, where the light-shielding layers overlaps the common auxiliary electrode.

4. (Currently Amended) A multi-domain liquid crystal display device comprising:

first and second substrates opposing each other between a liquid crystal layer;

a plurality of gate lines and data lines on the first substrate lengthwise and crosswise, to define at least two pixel regions;

a common auxiliary electrode on a layer equal to the gate lines to surround each of the pixel regions;

a gate insulating film on the first substrate;

a passivation film on the gate insulating film including the first substrate;

a pixel electrode in each of the pixel regions, wherein at least one of the pixel regions is divided into a plurality of domains; the pixel electrode not overlapping the common auxiliary electrode;

a light-shielding layer on the second substrate;

a color filter layer on the light-shielding layer;

a common electrode on the color filter layer;

a at least one electric field distortion dielectric structure in each of the at least two pixel regions, wherein the dielectric structures in neighboring pixel regions have different, and not mirror-image, configurations; and

an alignment film on at least one of the first and second substrates.

5. (Original) The multi-domain liquid crystal display device as claimed in claim 4, wherein the light-shielding layer overlaps the pixel electrode.

6. (Original) The multi-domain liquid crystal display device as claimed in claim 4, wherein the gate insulating film and the passivation film are formed in a region except the common auxiliary electrode.
7. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the common auxiliary electrode is electrically connected with the common electrode.
8. (Previously Presented) The multi-domain liquid crystal display device as claimed in claim 1, further comprising a thin film transistor formed in a crossing point of the gate lines and the data lines.
9. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the electric field dielectric structures are formed on the pixel electrode.
10. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the electric field dielectric structures are formed on the common electrode.
11. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the electric field dielectric structures are formed on the color filter layer.
12. (Currently Amended) A multi-domain liquid crystal display device comprising:
first and second substrates opposing each other between a liquid crystal layer;
a plurality of gate lines and data lines on the first substrate lengthwise and crosswise,
to define at least two pixel regions;

a common auxiliary electrode on a layer equal to the gate lines to surround each of the pixel regions;

a gate insulating film on the first substrate;

a passivation film on the gate insulating film including the first substrate;

a pixel electrode in each of the pixel regions, wherein at least one of the pixel regions is divided into a plurality of domains, the pixel electrode having an electric field induction window therein;

a light-shielding layer on the second substrate;

a color filter layer on the light-shielding layer;

a common electrode on the color filter layer;

at least one electric field distortion dielectric structure in each of the at least two pixel regions, wherein the dielectric structures in neighboring pixel regions have different, and not mirror-image, configurations; and

an alignment film on at least one of the first and second substrates.

13. (Currently Amended) A multi-domain liquid crystal display device comprising:

first and second substrates opposing each other between a liquid crystal layer;

a plurality of gate lines and data lines on the first substrate lengthwise and crosswise, to define at least two pixel regions;

a common auxiliary electrode on a layer equal to the gate lines to surround each of the pixel regions;

a gate insulating film on the first substrate;

a passivation film on the gate insulating film including the first substrate, the passivation film having an electric field induction window therein;

a pixel electrode in each of the pixel regions, wherein at least one of the pixel regions is divided into a plurality of domains;

a light-shielding layer on the second substrate;

a color filter layer on the light-shielding layer;

a common electrode on the color filter layer;

at least one electric field distortion dielectric structure in each of the at least two pixel regions, wherein the dielectric structures in neighboring pixel regions have different, and not mirror-image, configurations; and

an alignment film on at least one of the first and second substrates.

14. (Currently Amended) A multi-domain liquid crystal display device comprising:

first and second substrates opposing each other between a liquid crystal layer;

a plurality of gate lines and data lines on the first substrate lengthwise and crosswise, to define at least two pixel regions;

a common auxiliary electrode on a layer equal to the gate lines to surround each of the pixel regions;

a gate insulating film on the first substrate, the gate insulating film having an electric field induction window therein;

a passivation film on the gate insulating film including the first substrate;

a pixel electrode in each of the pixel regions, wherein at least one of the pixel regions is divided into a plurality of domains;

a light-shielding layer on the second substrate;

a color filter layer on the light-shielding layer;

a common electrode on the color filter layer;

at least one electric field distortion dielectric structure in each of the at least two pixel

regions, wherein the dielectric structures in neighboring pixel regions have different, and not mirror-image, configurations; and

an alignment film on at least one of the first and second substrates.

15. (Currently Amended) A multi-domain liquid crystal display device comprising:

first and second substrates opposing each other between a liquid crystal layer;

a plurality of gate lines and data lines on the first substrate lengthwise and crosswise, to define at least two pixel region;

a common auxiliary electrode on a layer equal to the gate lines to surround each of the pixel regions;

a gate insulating film on the first substrate;

a passivation film on the gate insulating film including the first substrate;

a pixel electrode in each of the pixel regions, wherein at least one of the pixel regions is divided into a plurality of domains;

a light-shielding layer on the second substrate;

a color filter layer on the light-shielding layer;

a common electrode on the color filter layer, the common electrode having an electric field induction window therein;

at least one electric field distortion dielectric structure in each of the at least two pixel regions, wherein the dielectric structures in neighboring pixel regions have different, and not mirror-image, configurations; and

an alignment film on at least one of the first and second substrates.

16. (Currently Amended) A multi-domain liquid crystal display device comprising:

first and second substrates opposing each other between a liquid crystal layer;

a plurality of gate lines and data lines on the first substrate lengthwise and crosswise, to define at least two pixel regions;

a common auxiliary electrode on a layer equal to the gate lines to surround each of the pixel regions;

a gate insulating film on the first substrate;

a passivation film on the gate insulating film including the first substrate;

a pixel electrode in each of the pixel regions, wherein at least one of the pixel regions is divided into a plurality of domains;

a light-shielding layer on the second substrate;

a color filter layer on the light-shielding layer, the color filter layer having an electric field induction window therein;

a common electrode on the color filter layer;

at least one electric field distortion dielectric structure in each of the at least two pixel regions, wherein the dielectric structures in neighboring pixel regions have different, and not mirror-image, configurations; and

an alignment film on at least one of the first and second substrates.

17. (Canceled)

18. (Currently Amended) A multi-domain liquid crystal display device comprising:

first and second substrates opposing each other between a liquid crystal layer;

a plurality of gate lines and data lines on the first substrate lengthwise and crosswise, to define at least two pixel regions;

a common auxiliary electrode on a layer equal to the gate lines to surround each of the pixel regions;

a gate insulating film on the first substrate;

a passivation film on the gate insulating film including the first substrate;

a pixel electrode in each of the pixel regions, wherein at least one of the pixel regions is divided into a plurality of domains;

a light-shielding layer on the second substrate;

a color filter layer on the light-shielding layer;

an over coat layer on the color filter layer, the over coat layer having an electric field induction window therein;

a common electrode on the over coat layer;

at least one electric field distortion dielectric structure in each of the at least two pixel regions, wherein the dielectric structures in neighboring pixel regions have different, and not mirror-image, configurations; and

an alignment film on at least one of the first and second substrates.

19. (Previously Presented) The multi-domain liquid crystal display device as claimed in claim 1, wherein the passivation film comprises a material selected from one group consisting of BCB, acrylic resin and polyimide

20. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the passivation film comprises a material selected from one group consisting of SiN_x , and SiO_x .

21. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the common auxiliary electrode comprises a material selected from one group consisting of ITO, Al, Mo, Cr, Ta, Ti and Al alloy.

22. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the pixel electrode comprises a material selected from one group consisting of ITO, Al and Cr.

23. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the common electrode comprises ITO.

24. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the dielectric structure has a dielectric constant smaller than that of the liquid crystal layer.

25. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the dielectric structure comprises a photosensitive material.

26. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the dielectric structure comprises a material selected from one group consisting of photoacrylate and BCB.

27. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the pixel region is divided into at least two regions so that the liquid crystal molecules of the liquid crystal layer have different driving characteristics on each region.

28. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the alignment film is divided into at least two regions so that liquid crystal molecules of the liquid crystal layer have different alignment characteristics on each region.

29. (Original) The multi-domain liquid crystal display device as claimed in claim 28, wherein at least one region of the alignment film is aligned.

30. (Previously Presented) The multi-domain liquid crystal display device as claimed in claim 28, wherein at least one of the two regions of the alignment film is not aligned.

31. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the liquid crystal constituting the liquid crystal layer has a positive dielectric anisotropy or a negative dielectric anisotropy.

32. (Original) The multi-domain liquid crystal display device as claimed in claim 1, further comprising a negative uniaxial film on at least one of the first substrate and the second substrate.

33. (Original) The multi-domain liquid crystal display device as claimed in claim 1, further comprising a negative biaxial film on at least one of the first substrate and the second substrate.

34. (Original) The multi-domain liquid crystal display device as claimed in claim 1, wherein the liquid crystal layer includes a chiral dopant.

35. (Currently Amended) A multi-domain liquid crystal display device comprising:
a data line to apply a data signal;
a pixel electrode for driving a liquid crystal;

a gate line crossed to the data line, to define a pixel region;
a common auxiliary electrode formed to surround the pixel region; and
a plurality of electric field distortion structures formed in different, and not mirror-image, configurations within neighboring pixel regions.

36. (Original) The multi-domain liquid crystal display device as claimed in claim 35, wherein the common auxiliary electrode is formed on a layer same as the gate line.

37. (Currently Amended) A multi-domain liquid crystal display device comprising:
a data line to apply a data signal;
a pixel electrode for driving a liquid crystal, wherein the pixel electrode is divided into a plurality of domains, the pixel electrode having an electric field induction window therein;
a gate line crossed to the data line, to define a pixel region;
a common auxiliary electrode formed to surround the pixel region; and
a plurality of electric field distortion dielectric structures in the plurality of domains, wherein the dielectric structures in neighboring pixel regions have different, and not mirror-image, configurations.